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IS: 3111 - 1984

Indian Standard SPECIFICATION FOR SILVER THREAD (First Revision)

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INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Indian Standard

SPECIFICATION FOR SILVER THREAD

(First Revision)

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Indian Standard SPECIFICATION FOR SILVER THREAD (First Revision)

O. FOREWORD

- **0.1** This Indian Standard (First Revision) was adopted by the Indian Standards Institution on 31 May 1984, after the draft finalized by the Precious Metals Sectional Committee had been approved by the Structural and Metals Division Council.
- **0.2** This standard was earlier published in 1965. Reference has been made in this revision to a comprehensive standard on methods of chemical analysis of silver thread. Other references have also been updated.
- 0.3 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS: 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard prescribes the requirements for pure silver thread and the quality of the base yarn to be used.

2. TERMINOLOGY

- 2.0 For the purpose of this standard, the following definitions shall apply.
- 2.1 Marcs Bundle of skeins (lachhis) or spools containing jari thread weighing net mass between 200 and 300 g is termed as 'marcs'.

^{*}Rules for rounding off numerical values (revised).

3. COMPOSITION

- 3.1 The minimum silver content of the silver thread shall be 50 percent by mass.
- **3.2 Purity of Silver** Silver used for the manufacture of silver thread shall be of minimum 91.6 percent by mass minimum purity (see IS: 2112-1981*).

4. BASE YARNS

4.1 Nature of Base Yarn and Its Composition

- 4.1.1 Realed Silk Yarn 16, 18, 20 or 22 denier.
- 4.1.2 Cotton Yarn

$60^{s}/2$	100	×	2	dtex
$80^{\rm s}/2$	74	X	2	dtex
$100^{\rm s}/2$	59	×	2	dtex
$120^{s}/2$	49	×	2	dtex
$70^{s}/3$	84	×	3	dtex
80s/3	74	×	3	dtex
$90^{\rm s}/3$	66	×	3	dtex

- 4.1.3 Viscose Rayon Yarn 55, 75 or 100 denier.
- 4.1.4 Nylon Yarn 15 denier.
- **4.2 Colour Fastness of the Base Yarn** Unless otherwise agreed to between the supplier and the purchaser, the colour fastness rating of the base yarn shall be not less than that given in Table 1 when tested in accordance with the relevant Indian Standard method referred to in Table 1.

5. PACKING

5.1 Silver thread shall be packed in packets designate as 'marcs' each of net mass (without spool) in between 200 and 300 g and each containing 8 or 16 skeins (lachhis) or 4 spools.

6. SAMPLING AND CRITERIA FOR CONFORMITY

6.1 Lot — In any consignment, all the packets of silver thread manufactured at a time and from a single type of base yarn, shall be grouped together to constitute a lot.



^{*}Grades of silver and silver alloys (first revision).

TABLE 1 FASTNESS TO LIGHT AND WASHING

(Clauses 4.2 and 7.1)

CHARACTERISTIC	FASTNESS RATING No.	METHOD OF TEST
(1)	(2)	(3)
Colour fastness to light	4 or better	IS: 686-1957* or IS: 2454-1967†
Colour fastness to washing	4 or better	IS: 687-1979‡

^{*}Method for determination of colour fastness of textile materials to daylight.

6.2 In order to determine the conformity of the lot to the requirements of the specification, sample shall be selected at random in accordance with Table 2, for random selection procedures, reference may be made to IS: 4905-1968*.

TABLE 2 SCALE OF SAMPLING

LOT SIZE (NUMBER OF PACKETS)	SAMPLE SIZE (NUMBER OF PACKETS)				
(1)	(2)				
Up to 10	2				
11 to 25	3				
26 to 50	4				
51 and above	5				

- 6.3 Each packet selected in accordance with Table 2, shall be examined for the material, its weight and mode of packing. If the samples are found satisfactory, further tests shall be conducted for chemical analysis.
- 6.4 For every 50 packets or part thereof, one test shall be conducted for chemical analysis and one test shall be carried out for the requirements of base yarn. The lot shall be considered conforming to the requirements of this specification, if there is no failure, in respect of these tests.
- 6.5 A minimum of 10 m of jari in the running length from one skein (lachhi) in the lot shall be checked for the nature of the base yarn, its count and fastness of its colour.

[†]Method for determination of colour fastness of textile materials to artificial light (xenon lamp).

[‡]Method for determination of colour fastness of textile materials to washing: Test 1 (second revision).

^{*}Methods for random sampling.

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6.6 The entire lot shall be rejected if the sample representing the lot fails to meet the requirements specified in this standard.

7. TESTS

7.1 Silver content of the silver thread shall be determined in accordance with the method given in IS: 9925-1981* and other tests carried out as specified in Table 1.

8. MARKING

- 8.1 Each 'marc' shall be marked legibly with the percentage of silver, length in metres per mass in grams, nature of the base yarn and its count, name of the manufacturer or his recognized trade-mark, and the place of production.
- 8.1.1 The material may also be marked with the ISI Certification Mark.

Note — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

^{*}Method for determination of gold and silver in gold thread and embreidery materials.

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